AMENDMENTS TO THE CLAIMS:

Claims 1-5, 7-9, 11-18, 20-22, 24-33, and 35-47 were pending at the time of the Office Action.

Claims 1-3, 5, 7, 12-17, 20, 25, 26, 28, 30-33, 43, and 46 are hereby amended.

Claims 1-5, 7-9, 11-18, 20-22, 24-33, and 35-47 remain pending.

1. (Currently Amended) An apparatus for supporting a tool relative to a surface of a workpiece, the apparatus comprising:

a base ~~adapted to be attached to the workpiece~~;

a tool support coupled to the base and moveable along a translation axis relative to the base, the tool support being configured to be coupled to the tool, at least one of the base and the tool support being further configured to operatively position the tool relative to the workpiece for performing the manufacturing operation on the workpiece; and

a biasing device having a first portion operatively coupled to ~~at least one of~~ the base and a second portion coupled to the tool support, the first and second portions being moveably coupled and configured to apply a biasing force to the tool support ~~biasing device being adapted~~ to at least partially counterbalance a force exerted on the tool support along the translation axis by a weight of the tool coupled to the tool support ~~, wherein the biasing device includes a motor~~.

2. (Currently Amended) The apparatus of Claim 1, wherein the biasing device is further configured to adjustably apply the biasing force, the apparatus further comprising a control mechanism coupled to the biasing device, the control mechanism being configured to adjustably

control a magnitude of the biasing force ~~translation axis has at least a component that is perpendicular to a local normal to the surface of the workpiece~~.

3. (Currently Amended) The apparatus of Claim 2 1, wherein the control mechanism is further configured to control a direction of the biasing force ~~tool support is slideably coupled to the base along a guide rail~~.

4. (Previously Presented) The apparatus of Claim 1, wherein the tool support is moveable in a first direction along the translation axis, and in a second direction along the translation axis opposite to the first direction.

5. (Currently Amended) The apparatus of Claim 1, wherein the biasing device includes a pneumatic actuator, further comprising a control valve coupled to the pneumatic actuator, the control valve being configured to adjustably control at least one of a magnitude and a direction of a biasing force applied to the tool support by adjustably controlling a pressure within the pneumatic actuator.

6. (Canceled)

7. (Currently Amended) The apparatus of Claim 1, wherein the ~~motor comprises~~ biasing device includes a ~~constant torque~~ motor, the motor being at least one of a constant torque motor and a non-constant torque motor.

8. (Previously Presented) The apparatus of Claim 1, wherein the biasing device is biasable along a biasing axis that is aligned with the translation axis.

9. (Previously Presented) The apparatus of Claim 1, wherein the biasing device is controllably biasable in a biasing direction along a biasing axis.

10. (Canceled)

11. (Previously Presented) The apparatus of Claim 12, wherein the translation axis is at least partially transverse to the at least one elongated rail member.

12. (Currently Amended) An apparatus for supporting a tool relative to a surface of a workpiece, the apparatus comprising:

a base configured ~~adapted~~ to be attached to the workpiece, wherein the base includes:

at least one elongated rail member;

a plurality of vacuum attachment devices connected to the at least one rail member and configured to be coupleable to the surface of the workpiece; and

a carriage assembly moveably coupled to the at least one rail member, wherein the carriage assembly includes a drive assembly having a drive motor operatively engaging the at least one rail member and configured ~~adapted~~ to drive the carriage assembly along the at least one rail member along a movement axis;

a tool support coupled to the carriage assembly and moveable along a translation axis relative to the carriage assembly ~~workpiece~~, the tool support being configured to be coupled to the tool; and

a biasing device having a first portion operatively coupled to ~~at least one of~~ the base and a second portion coupled to the tool support, the first and second portions being moveably coupled and configured to apply a biasing force to the tool support ~~biasing device being adapted~~

to at least partially counterbalance a force exerted on the tool support along the translation axis by a weight of the tool coupled to the tool support.

13. (Currently Amended) The apparatus of Claim 1, wherein the base includes:

first and second elongate flexible rails, the rails being spaced apart and approximately parallel to each other;

~~a plurality of vacuum attachment devices connected to each rail and spaced at intervals therealong for releasably attaching each rail to the surface of the workpiece by vacuum;~~ and

a carriage coupled to the tool support and moveably engaging the rails, the carriage being moveable along the rails to position the tool support at various locations relative to the workpiece.

14. (Currently Amended) An assembly for performing a manufacturing operation on a surface of a workpiece, the assembly comprising:

a base ~~adapted to be attached to the workpiece~~;

a tool support moveably coupled to the base and moveable along a translation axis relative to the base, at least one of the base and the tool support being configured to operatively position the tool relative to the workpiece for performing the manufacturing operation on the workpiece;

a manufacturing tool coupled to the tool support and configured ~~adapted~~ to be engageable with the surface of the workpiece to perform the manufacturing operation on the surface of the workpiece; and

a biasing device having a first portion ~~operatively~~ coupled to ~~at least one of~~ the base and a second portion coupled to the tool support, the first and second portions being moveably coupled and configured to apply a biasing force to the tool support ~~biasing device being adapted~~ to at least partially counterbalance a force exerted on the tool support along the translation axis by a weight of the manufacturing tool ~~, wherein the biasing device includes a motor~~.

15. (Currently Amended) The assembly of Claim 14, wherein the biasing device is further configured to adjustably apply the biasing force, the assembly further comprising a control mechanism coupled to the biasing device, the control mechanism being configured to adjustably control a magnitude of the biasing force ~~translation axis has at least one component that is perpendicular to a local normal to the surface of the workpiece~~.

16. (Currently Amended) The apparatus of Claim 15 ~~14~~, wherein the control mechanism is further configured to control a direction of the biasing force ~~tool support is slideably coupled to the base along a guide rail~~.

17. (Currently Amended) The apparatus of Claim 18 ~~14~~, , further comprising a control valve coupled to the pneumatic actuator, the control valve being configured to adjustably control at least one of a magnitude and a direction of a biasing force applied to the tool support by adjustably controlling a pressure within the pneumatic actuator ~~wherein the tool support is moveable in a first direction along the translation axis, and in a second direction along the translation axis opposite to the first direction~~.

18. (Original) The apparatus of Claim 14, wherein the biasing device includes a pneumatic actuator.

19. (Canceled)

20. (Currently Amended) The apparatus of Claim 14, wherein the ~~motor comprises~~ biasing device includes a ~~constant torque~~ motor, the motor being at least one of a constant torque motor and a non-constant torque motor.

21. (Previously Presented) The apparatus of Claim 14, wherein the biasing device is biasable along a biasing axis that is aligned with the translation axis.

22. (Previously Presented) The apparatus of Claim 14, wherein the biasing device is controllably biasable in a biasing direction along a biasing axis.

23. (Canceled)

24. (Previously Presented) The apparatus of Claim 25, wherein the translation axis is at least partially transverse to the at least one elongated rail member.

25. (Currently Amended) An assembly for performing a manufacturing operation on a surface of a workpiece, the assembly comprising:

a base configured ~~adapted~~ to be attached to the workpiece, wherein the base includes:

at least one elongated rail member;

a plurality of vacuum attachment devices connected to the at least one rail member and configured to be coupleable to the surface of the workpiece; and

a carriage assembly moveably coupled to the at least one rail member, wherein the carriage assembly includes a drive assembly having a drive motor operatively engaging the at least one rail member and configured ~~adapted~~ to drive the carriage assembly along the at least one rail member;

a tool support coupled to the carriage assembly and moveable along a translation axis relative to the carriage assembly ~~workpiece~~;

a manufacturing tool coupled to the tool support and configured ~~adapted~~ to be engageable with the surface of the workpiece to perform the manufacturing operation on the surface of the workpiece; and

a biasing device having a first portion operatively coupled to ~~at least one of~~ the base and a second portion coupled to the tool support, the first and second portions being moveably coupled and configured to apply a biasing force to the tool support ~~biasing device being adapted~~ to at least partially counterbalance a force exerted on the tool support along the translation axis by a weight of the manufacturing tool.

26. (Currently Amended) The assembly of Claim 14, wherein the base includes:

first and second elongate flexible rails, the rails being spaced apart and approximately parallel to each other;

~~a plurality of vacuum attachment devices connected to each rail and spaced at intervals therealong for releasably attaching each rail to the surface of the workpiece by vacuum;~~ and

a carriage coupled to the tool support and moveably engaging the rails, the carriage being moveable along the rails to position the tool support at various locations relative to the workpiece.

27. (Original) The assembly of Claim 14, wherein the manufacturing tool includes a drill and the manufacturing operation includes a drilling operation.

28. (Currently Amended) A method of performing a manufacturing operation on a surface of a workpiece, the method comprising:

moveably supporting a manufacturing tool relative to the ~~proximate a~~ surface of the workpiece using a tool support moveably coupled to a base, the manufacturing tool being moveable along a translation direction ~~over the surface of the workpiece~~; and

applying ~~providing~~ a biasing force to the tool support ~~in a biasing direction~~ using a biasing device having a first portion coupled to the base and a second portion coupled to the tool support, the first and second portions being moveably coupled and configured to apply the biasing force to at least partially counterbalance a force applied to the tool support by a weight of the manufacturing tool~~, the biasing direction being substantially parallel to the translation direction, wherein providing a biasing force in a biasing direction using a biasing device includes providing a biasing force in a biasing direction using a motor~~.

29. (Original) The method of Claim 28, wherein moveably supporting a manufacturing tool proximate a surface of the workpiece includes slideably supporting the manufacturing tool on a guide rail positioned proximate the surface of the workpiece, the manufacturing tool being moveable in a first translation direction along the guide rail, and also in a second translation direction opposingly oriented to the first translation direction.

30. (Currently Amended) The method of Claim 28, wherein applying ~~providing~~ a biasing force ~~in a biasing direction using a biasing device~~ includes adjustably applying ~~providing~~ a

biasing force using a biasing device configured to adjustably apply the biasing force ~~that is adapted to counterbalance a force exerted on the manufacturing tool along the translation direction~~.

31. (Currently Amended) The method of Claim 30, wherein adjustably applying ~~providing~~ a biasing force ~~that is adapted to counterbalance a force exerted on the manufacturing tool~~ includes adjustably applying at least one of a magnitude and a direction of the biasing force ~~providing a biasing force that is adapted to counterbalance a gravitational force exerted on the manufacturing tool~~.

32. (Currently Amended) The method of Claim 33 ~~28~~, wherein applying ~~providing~~ a biasing force ~~in a biasing direction~~ using a biasing cylinder ~~device~~ includes adjustably applying ~~providing~~ a biasing force using a control device coupled to the biasing cylinder and configured to adjustably control at least one of a magnitude and a direction of the biasing force ~~that is oriented opposite to the translation direction~~.

33. (Currently Amended) The method of Claim 28, wherein applying ~~providing~~ a biasing force ~~in a biasing direction~~ using a biasing device includes applying ~~providing~~ a biasing force ~~in a biasing direction~~ using a biasing cylinder.

34. (Canceled)

35. (Original) The method of Claim 28, further comprising moving the manufacturing tool along the translation direction.

36. (Original) The method of Claim 28, further comprising performing the manufacturing operation with the manufacturing tool on the surface of the workpiece.

37. (Original) The method of Claim 36, wherein the manufacturing tool includes a drill and the manufacturing operation includes a drilling operation.

38. (Original) A method of performing a manufacturing operation on a surface of a workpiece, the method comprising:

detachably securing a support member to the surface of the workpiece;

moveably attaching a manufacturing tool to the support member, the manufacturing tool being moveable relative to the support member along a translation direction over the surface of the workpiece;

securely engaging the manufacturing tool with the surface of the workpiece; and

with the manufacturing tool securely engaged with the surface of the workpiece, detaching the support member from the surface of the workpiece; and

with the manufacturing tool securely engaged with the surface of the workpiece, moving the support member relative to the manufacturing tool.

39. (Original) The method of Claim 38, wherein detachably securing a support member to the surface of the workpiece includes detachably securing a pair of elongated rail members to the surface of the workpiece.

40. (Original) The method of Claim 38, wherein detachably securing a support member to the surface of the workpiece includes providing a vacuum to a vacuum assembly to detachably secure the support member to the surface of the workpiece.

41. (Original) The method of Claim 38, wherein moving the support member relative to the manufacturing tool includes moving the support member along an x-axis relative to the manufacturing tool, the x-axis being approximately perpendicular with the translation direction.

42. (Original) The method of claim 38, wherein moving the support member relative to the manufacturing tool includes moving the support member along an x-axis relative to the manufacturing tool, the x-axis being approximately perpendicular with the translation direction and with a local normal to the surface of the workpiece.

43. (Currently Amended) An apparatus for supporting a tool relative to a surface of a workpiece, the apparatus comprising:

a base ~~adapted to be attached to the workpiece~~;

a tool support coupled to the base and moveable along a translation axis relative to the base, the tool support being configured to be coupled to the tool, at least one of the base and the tool support being configured to operatively position the tool relative to the workpiece for performing the manufacturing operation on the workpiece; and

a biasing device including a pressurizable cylinder having a first portion ~~rigidly~~ coupled to the tool support and a second portion coupled to the base, the first and second portions being moveably coupled and configured to apply a biasing force to the tool support ~~pressurizable cylinder being adapted~~ to at least partially counterbalance a force exerted on the tool support along the translation axis by a weight of the tool coupled to the tool support.

44. (Previously Presented) The apparatus of Claim 43, wherein the base includes:

at least one elongated rail member coupleable to the surface of the workpiece; and

a carriage assembly moveably coupled to the at least one rail member, wherein the carriage assembly includes a drive assembly having a drive motor operatively engaging the at

least one rail member and adapted to drive the carriage assembly along the at least one rail member.

45. (Previously Presented) The apparatus of Claim 43, wherein the tool support is slideably coupled to the base along a guide rail.

46. (Currently Amended) A method of performing a manufacturing operation on a surface of a workpiece, the method comprising:

moveably supporting a manufacturing tool relative to the ~~proximate a~~ surface of the workpiece using a tool support moveably coupled to a base, the manufacturing tool being coupled to a tool support, the tool support moveable along a translation direction ~~over the surface of the workpiece~~; and

applying ~~providing~~ a biasing force to the tool support ~~in a biasing direction~~ using a pressurizable cylinder having a first portion ~~rigidly~~ coupled to the tool support and a second portion coupled to the base, the first and second portions being moveably coupled and configured to apply the biasing force to at least partially counterbalance a force applied to the tool support by a weight of the manufacturing tool~~, the biasing direction being substantially parallel to the translation direction~~.

47. (Previously Presented) The method of Claim 46, wherein moveably supporting a manufacturing tool includes movably coupling a carriage assembly to at least one elongated rail member coupled to the surface of the workpiece, wherein the carriage assembly includes a drive assembly having a drive motor operatively engaging the at least one rail member and adapted to drive the carriage assembly along the at least one rail member.